1. ANNOTATED BROWSER NETWORK DIAGRAM

Document (HTML)
This is the main page e.g index.html
Status Code: 200 OK if loaded successfully
Timing: Often the first request in the waterfall

CSS Files
Stylesheet defining page layout & design
Status code: 200 OK
Size: Varies depending on the framework
Timing: Loaded early to avoid FOUC

JS Files
Scripts for interactivity, animations & data fetching
Status Code: 200OK
Size: Varies widely
Timing: Often deferred or async and can appear later in waterfall if non blocking

Images/Media
PNG, SVG, JPG, GIF or video/audio files
Status Code: 200 OK
Size: Often the largest file and can slow page load
Timing: Usually loaded after HTML/CSS, sometimes its lazy loaded.
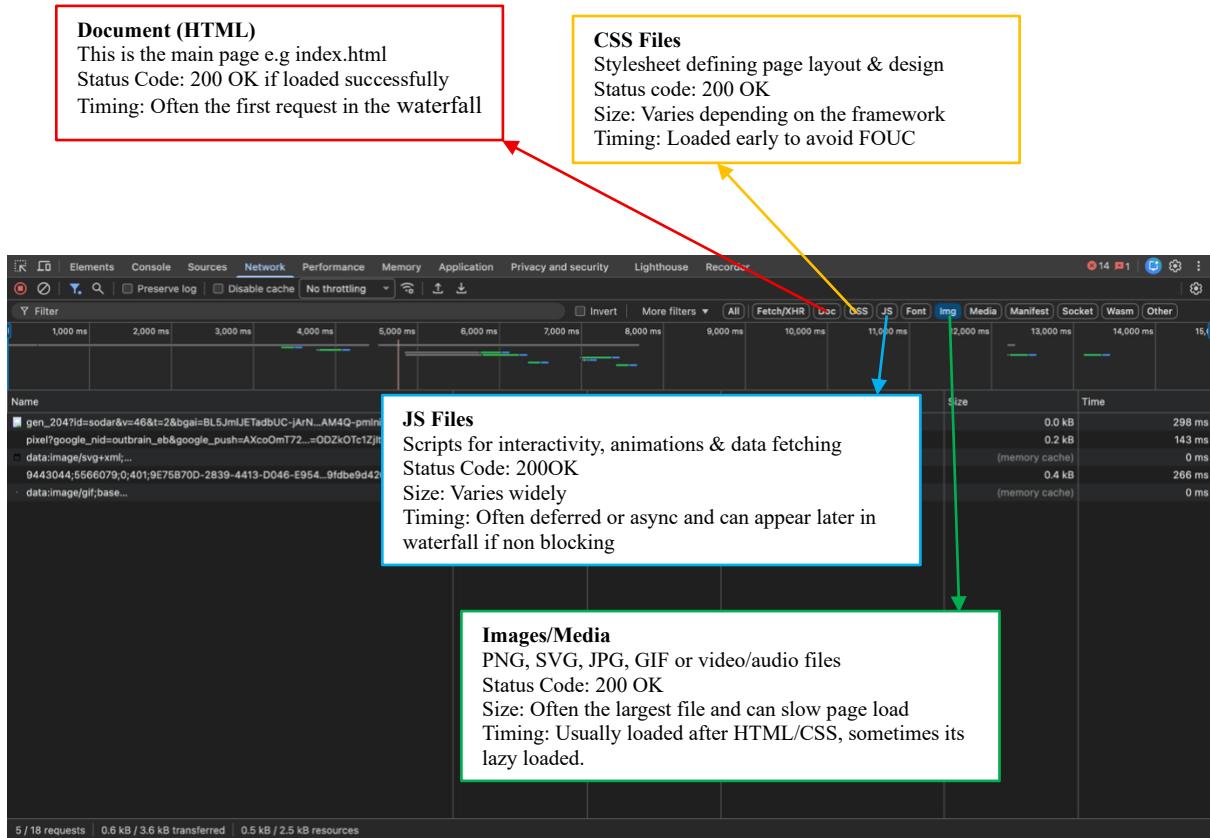
2. STATUS CODES

- o `200 OK` → Successfully loaded.
- o `304 Not Modified` → Cached version used.
- o `404 Not Found` → Missing file.
- o `500` → Server error.

3. TIMING WATERFALL

Shows the order and duration of each resource loading.

a. **Phases:**
   i. **DNS Lookup:** Time to resolve domain name.
   ii. **Initial Connection / TLS:** Time to connect to server and establish HTTPS.
   iii. **Waiting / TTFB:** Time until first byte received.
   iv. **Content Download:** Time to download the resource.
b. Helps identify slow-loading files or bottlenecks.